Evaluation of Shared Visions Preschool Programs

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Betty Zan University of Northern Iowa State University The Iowa Shared Visions Preschool Program was established in Iowa Code in 1987 to provide state funded quality child development programs for children at risk for poor outcomes. Each year, Shared Visions Preschool Program funds purchase services for approximately 2,400 children enrolled in 116 classrooms in 51 counties. Shared Visions Programs serve children between the ages of 3 and 5; the majority of children served are 4-year-olds.

The current evaluation was undertaken to examine the relations among classroom quality and characteristics, teacher characteristics, and child outcomes. Providing high quality services to children at risk has been a primary goal of Shared Visions Preschool Programs; indicators of high quality have been sought consistently. Shared Visions Preschool Programs are accredited by the National Association for the Education of Young Children (NAEYC); work to maintain accreditation supported by the Iowa Department of Education is ongoing. A recent examination of classroom quality in all Shared Visions Preschool Program classrooms revealed that the average rating on the Early Childhood Environment Rating Scale-Revised (ECERS-R; Harms, Clifford, & Cryer, 1998) was 5.8 (scale of 1-7 where 1 represents inadequate care, 3 represents care of minimal quality, 5 represents good quality, and 7 represents excellent quality) (Zan, 2003).

The pool of classrooms to be included in the current evaluation was selected from among those that scored highest and lowest on the ECERS-R in the evaluation conducted by Zan (2003). Two pools of classrooms expected to score in the high range (20) and in the low range (22) were created based on these ECERS-R scores. Curriculum-related aspects of quality were of particular interest in this study. Therefore, classrooms were included in the low quality pool if they achieved an ECERS-R Total mean score of less than or equal to 5.5, as well as scores of less than or equal to 5.5 on the Activities and Language and Reasoning subscales. The ECERS-R

Total mean score in this group was 4.97 (SD = .49, Range 3.45-5.5). The mean score on the Activities subscale was 4.05 (SD = .62, Range = 2.7-5.0), and the mean score on the Language and Reasoning subscale was 4.73 (SD = 94, Range = 1.5-5.5). Classrooms were included in the high quality pool if they achieved an ECERS-R Total mean score greater than or equal to 6.0, as well as scores greater than 6.0 on the Activities and Language and Reasoning subscales. The ECERS-R Total mean score in this group was 6.47 (SD = .21, Range = 6.11-6.79). The mean score on the Language and Reasoning subscale was 6.88 (SD = .31, Range = 6.0-7.0), and the mean score on the Activities subscale was 6.29 (SD = .23, Range = 6.0-6.9). It should be noted that these scores are slightly higher than what is normally observed in preschool classrooms; likely this is due to the requirement that all Shared Visions classrooms achieve and maintain NAEYC accreditation.

Because quality improvements efforts had occurred in the ensuing years and there had been considerable turnover of staff, the ECERS-R scores from the previous study could no longer be considered reliable estimates of current classroom quality. Therefore, assessment of classroom quality was repeated in order to enable examination of concurrent relations among classroom quality and characteristics, teacher characteristics, and children's development. Data were collected across two years. The first cohort of 21 classrooms and children was assessed during the 2004-2005 school year, and the second cohort of 20 classrooms was assessed during the 2005-2006 school year.

Participating children were selected randomly from among the 4-year-old children enrolled in the classrooms observed each year. Children were randomly selected from among those who were not receiving early childhood special education (ECSE) services under the

auspices of an Individualized Education Program (IEP) and whose parents consented to their participation.

Procedures

Information to describe the classrooms, teachers, and children was collected via annual reports submitted to the Iowa Department of Education by Shared Visions classroom teachers and/or program administrators. Classroom quality data were collected by non-participant observers who spent three to four hours in each classroom. Three types of data were collected on participating children: fall teacher reports of children's developmental status, direct assessment of children's language and cognitive skills and teacher report of the children's social-emotional skills (spring only for Cohort 1, fall and spring for Cohort 2), and early literacy skills at kindergarten enrollment. Scores on literacy measures at the time of kindergarten enrollment, collected as part of state-wide assessment reporting, were gathered for children in both cohorts. Table 1 presents a summary of the data collection schedule.

Table 1. Data Collection Schedule

Measures	Cohort 1	Cohort 2
Classroom Quality Observations	Fall, 2004	Fall, 2005
Teacher reports of developmental status	Fall, 2004	Fall, 2005
Direct Child Assessment – Fall	NA	Fall, 2005
Direct Child Assessment – Spring	Spring, 2005	Spring, 2006
Fall Kindergarten Assessments	Fall, 2005	Fall, 2006

Participants

The tables in this section describe the participants in the current evaluation. Table 2 presents information to describe the classrooms, Table 3 presents information to describe the teachers, and Table 4 presents information to describe the children enrolled in the participating

classrooms, as well as those who were assessed. On Table 4, 'Age' of children assessed was calculated based on the child's age at the time the spring assessment was completed.

Table 2. Description of Classrooms

Descriptor	Mean (Range)
Children enrolled	16 (6-21)
Children with an IEP	2.03 (0-10)
Classroom staff members	2 (1-4)
	Total Numbers
Children with an IEP prior to enrollment	53
Children with an IEP established after enrollment	35
Curriculum used	
Creative Curriculum	20
High/Scope Preschool Curriculum	8
Activity-based Intervention	3
Opening the World of Learning	2
Teacher-generated	10

Table 3. Description of Teachers

Descriptor	Number (Range)	
Gender		
Female	39	
Male	1	
Highest Education Level		
High school diploma	3	
Child Development Associate Credential	1	
Associate's degree	4	
Bachelor's degree	26	
Master's degree	5	
Years of Experience	Mean=5.79 (1-15)	

Table 4. Description of Children

Descriptor	Children enrolled (N=642)	Children assessed (N=191)		
Ethnicity				
Caucasian	409 (64%)	107 (56%)		
African American	142 (22%)	22 (12%)		
Hispanic	79 (12%)	11 (6%)		
Native American	7 (1%)			
Asian/Pacific Islander	5 (1%)	2(1%)		
Missing		49 (26%)		
Gender				
Male	339 (53%)	84 (44%)		
Female	303 (47%)	103 (54%)		
Missing	` ,	4 (2%)		
Age (Months)	55 (33-69)	55.87 (40-66)		

Measures

Classroom quality. Program quality was measured using three instruments. The Caregiver Interaction Scale (CIS; Arnett, 1989), a 25 item measure, allows the observer to rate the quality of the teacher's interactions with the children on a 1 (poor) to 4 (good) point scale. The Early Childhood Environment Rating Scale-Revised Edition (ECERS-R; Harms, Cryer, & Clifford, 1998) provides a rating of overall, or global, quality and consists of 43 items organized into the following subscales: (a) Space and Furnishings, (b) Personal Care Routines, (c) Language and Reasoning, (d) Activities, (e) Interaction, (f) Program Structure, and (g) Parents and Staff. Each item is rated using a seven-point scale where 1 indicates inadequate quality, 3 indicates minimal quality, 5 indicates good quality, and 7 indicates excellent quality. Finally, interest in program quality, most specifically quality in curriculum-related areas, led to the decision to use two subscales from the Early Childhood Environmental Rating Scale-Extended (ECERS-E; Sylva, Siraj-Blatchford, & Taggart, 2003) to examine the quality of curricular

activities in the areas of literacy and mathematics. The ECERS-E is scored similarly to the ECERS-R.

Child development. Instruments were selected to assess children's skills in the areas of early literacy, math, and social-emotional development. The *Bracken Basic Concept Scale-Revised* (BBCS-R; Bracken, 1998) was used to assess skills in several areas. The following six sub-tests were administered to each child: colors, letters, numbers/counting, sizes, comparisons, shapes, direction/position. The scores from these sub-tests were then totaled and converted into a School Readiness Composite (SRC) score. The BBCS-R is a standardized measure, and the SRC is a standardized score with a mean score of 100 and a standard deviation of 15. The *Preschool Language Scale-4*th *Edition* (PLS-4; Zimmermman, Steiner, & Pond, 2002) was used to measure auditory comprehension and expressive communication skills. Scores for each subscale of the PLS-4, as well as for the total measure are reported. The total score, as well as scores on the auditory comprehension and expressive language subscales of the PLS-4 have mean scores of 100 with a standard deviation of 15. The BBCS-R and the PLS-4 were administered to each child by a trained research assistant.

Social-emotional development was assessed using the *Devereux Early Childhood*Assessment for Children ages 2 through 5 Years (DECA; LeBuffe, & Naglieri, 1998) and the Social Competence and Behavior Evaluation Scale (SCBE-30; LaFreniere, 1998). The DECA is a 37-item questionnaire that measures children's initiative, self-control, attachment, and behavioral concerns. Using the DECA, T-scores are reported in the area of Total Protective Factors, a combination of initiative, self-control, and attachment, as well as for Behavioral Concerns. The SCBE-30 is a 30-item questionnaire that measures children's social skills and problem behaviors. A mean score can be calculated for each of three areas: Social Competence,

Anger-Aggression, and Anxiety-Withdrawal. Both these measures were completed by each child's classroom teacher who was provided instructions on completion of the measures.

The majority of participating teachers submitted information regarding the children's development in the fall of each year. This information was collected via a variety of instruments based on observations of children's participation in classroom activities. Teachers used one (or two) of the following instruments to assess children's skills. Table 5 presents information regarding the numbers of classrooms in which each measure was used as well as the numbers of children assessed with each measure. Complete references for these measures are available in the Appendix.

Table 5. Measures Used by Shared Visions Teachers' for Assessments of Children's Skills

Measure	Classrooms using Measure	Children Assessed $N = 169$ total children
Devereaux Early Childhood Assessment (DECA)	5	27
Creative Curriculum Developmental Continuum (CCDC)	9	54
Brigance Inventory of Early Development – II (IED-II)	5	29
Work Sampling System Developmental Checklist (WSSDC)	4	18
Child Observation Checklist	2	5
Preschool Observation Form (POF)	1	3
Ages & Stages Questionnaire (ASQ)	2	9
Homemade	2	12
Individual Growth & Development Indicators (IGDI)	2	14
Des Moines Public School Early Childhood Progress Report	1	6
Grant Wood AEA Report	1	5
Developmental Indicators for the Assessment of Learning (DIAL-3)	2	10
Anecdotal Records	1	4
Waterloo Community School Concepts of Print & Phonemic Awareness (CoP & PA)	1	8

Children's early literacy skills were assessed at kindergarten entry. These assessments were completed by the children's classroom teachers, before October 1 of each school year to fulfill assessment reporting required by the Iowa Department of Education. Table 6 presents the measures used to assess children's skills. Full references for these measures are available in the Appendix.

Table 6. Measures Used by Kindergarten Teachers to Assess Children's Literacy Skills

	Children
Measure	Assessed
Dynamic Indicators of Basic Early Literacy Skills (DIBELS)	114 (57.9%)
Phonological Awareness Test (PAT)	12 (6.1%)
Teacher-developed Assessments	70 (35.9%)

Results

Classroom Quality

Overall mean scores were calculated for each of the classroom quality measures. The mean overall ECERS-R Total mean score was 4.49. In addition, the ECERS-R Total mean score and sub-scale mean scores were calculated for each classroom; these overall scores are presented in the Appendix. Participating classrooms were divided into two groups based on the median split (4.6) of their ECERS-R Total Scores. This cut point was used to divide classrooms into the high quality or low quality groups which are used below to summarize classroom descriptive data.

The mean rating for the ECERS-E Literacy subscale was 4.01, and the mean rating for the ECERS-E Mathematics subscale was 2.68. The mean rating on the CIS was 3.32. A chart summarizing findings with the ECERS-R and ECERS-E is presented below in Figure 1. Detailed information regarding the range of scores on each of these measures, as well as the sub-scale scores is presented below in Table 7.

Figure 1. ECERS-R and ECERS-E Mean Scores

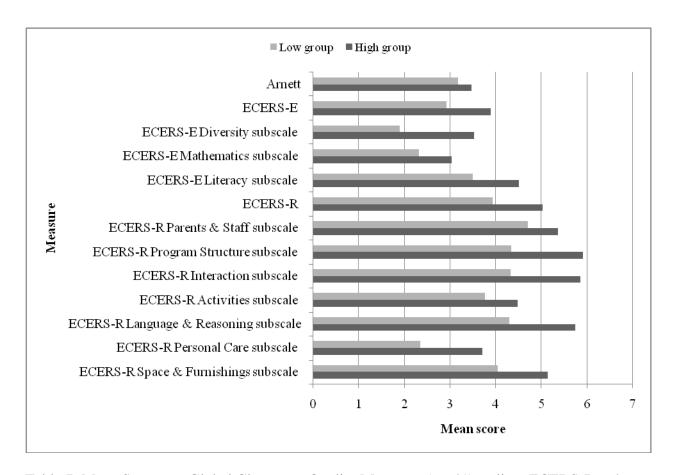


Table 7. Mean Scores on Global Classroom Quality Measures (N=41), split at ECERS-R < 4.6

	M	ean	Ra	nge
Measure	High (n = 21)	Low $(n = 20)$	High $(n = 21)$	Low $(n = 20)$
ECERS-R	5.03	3.93	4.65-5.86	2.42-4.48
ECERS-R Space & Furnishings subscale	5.14	4.04	4.13-6.88	2.71-5.00
ECERS-R Personal Care subscale	3.70	2.34	2.20-6.33	1.00-3.40
ECERS-R Language & Reasoning subscale	5.74	4.29	4.50-7.00	2.00-6.75
ECERS-R Activities subscale	4.47	3.77	3.60-6.00	2.50-5.70
ECERS-R Interaction subscale	5.85	4.32	2.40-7.00	1.00-6.20
ECERS-R Program Structure subscale	5.90	4.33	4.25-7.00	1.00-5.75
ECERS-R Parents & Staff subscale	5.36	4.70	4.00-6.17	3.17-6.33
ECERS-E	3.88	2.92	2.64-5.00	1.73-5.64
ECERS-E Literacy subscale	4.50	3.50	3.00-5.83	2.00-6.50
ECERS-E Mathematics subscale	3.02	2.31	1.50-4.75	1.00-6.00
Arnett	3.47	3.17	2.92-3.69	2.58-3.72

Examination of the ECERS-R subscale scores of these two groups, and particularly of the ranges of several subscale scores in the two groups, indicated that the areas of program quality that we expected to most influence child outcomes were not necessarily captured when the global quality scores were used to split these two groups. In particular, we were struck by the range of scores in the curriculum-related subscales on the ECERS-R and the ECERS-E subscales used in this study. Some classrooms in the high quality group had very low scores in these curriculumrelated areas, and some classrooms in the low quality group had very high scores on these subscales. We were concerned that these inconsistencies could potentially interfere with our ability to obtain meaningful information concerning the relations between classroom quality and child outcomes. For this reason, we created a composite variable that included subscale scores from these curriculum-related subscales. This variable, Academic-Related Curriculum Quality (ACQ), is a composite of two subscales from the ECERS-R (Language and Reasoning, Activities) and two subscales from the ECERS-E (Literacy, Mathematics) best suited to measure curriculum-related aspects of the classroom. Based on this composite variable, ACQ, we then divided the classrooms into three curriculum-related quality groups. Descriptive statistics on these three quality groups are presented below in Table 8.

Table 8. Mean Classroom Scores on Academic-Related Curriculum Quality (N=41)

		Mean			Range	
	High	Medium	Low	High	Medium	Low
Measure	(n = 13)	(n = 16)	(n = 12)	(n = 13)	(n = 16)	(n = 12)
ACQ Total Score	5.07	3.90	2.86	4.73-5.69	3.53-4.50	2.10-3.36
ECERS-R Language						
& Reasoning subscale	6.12	5.14	3.71	4.50-7.00	3.75-6.00	2.00-4.75
ECERS-R Activities						
Subscale	4.95	4.03	3.37	4.00-6.00	3.50-5.50	2.50-4.70
ECERS-E Literacy						
Subscale	5.25	3.84	2.90	4.33-6.50	3.00-5.00	2.00-4.00
ECERS-E						
Mathematics Subscale	3.95	2.54	1.48	2.33-6.00	1.50-3.25	1.00-2.00

Two additional variables were created to facilitate examination of factors potentially influencing classroom quality. We examined the number of community collaborations in which each participating classroom was involved. The different types of community collaborations in which classrooms were involved, as well as the numbers of classrooms involved in each type, are presented in Table 9. The overall number of community partnerships in which classrooms were involved ranged from 0 to 10. The average number of community partnerships was 4.3 (SD = 2.5). This total number of community partnerships was systematically related to overall classroom quality as measured by the ECERS-R Total Score (r = .371, p = .02) and also to the Assets Index Score (r = .601, p = .001). Calculation of the Assets Index Score is explained below.

Table 9. Types of Community Collaborations

Community Collaborations				
Partner Organization	Number of Classrooms			
Community Business	23			
Community Organization	21			
Health Provider	19			
AEA/School District	18			
Empowerment	15			
Department of Human Services	12			
Community Library	11			
Colleges	9			
Iowa State University Extension	9			
Health Department	6			
High School/Middle School	4			
Child Care	3			
Head Start	3			
Transportation	1			

In addition, we created an Assets Index Score for each classroom. An Assets Index was first proposed by Raikes and her colleagues (2006) as an alternative to examining the relations between individual variables that might influence classroom quality and actual classroom quality because past researchers have demonstrated that good things often go together (Phillips, Mekos, Scarr, McCartney, & Abbott-Shim, 2000). In other words, when classroom quality is high, a number of interrelated factors likely to influence that quality generally are in place. Raikes and her colleagues used this fact to provide the rationale for creating an Assets Index to describe "a culture of quality" and use a program's level on this Assets Index to facilitate examination of the relations between this overall level of assets and classroom quality. Raikes and her colleagues did, indeed, find that overall number of assets was related to child care quality in both center-based and family home child care settings (2006). Similarly, Hegland and Oesterreich (2005) found that overall number of assets was related to classroom quality in preschool classrooms that

served children with Individualized Education Programs (IEPs). To create an Assets Index for this study, we identified available variables likely to be associated with level of classroom quality. For each classroom, each of these variables was scored as present or absent. An Assets Index score was created for each classroom by summing the number of assets present. The variables included in the Assets Index are presented below in Table 10. Total number of assets ranged from 1 to 6, with the largest number of classrooms (22) having 5 or more assets; the average number of assets was 4.36 (SD = 1.2). Classroom summaries of the total number of community collaborations and total number of assets are presented in Table 11. Table 11 reveals that nearly all participating classrooms had multiple assets and were engaged in multiple community partnerships.

Table 10. Assets Index Variables

Shared Visions Assets

- 1. Total clock hours of training related to child care in previous year (25 or more)
- 2. Completed training on a published curriculum or assessment
- 3. Used a published curriculum
- 4. Accredited center
- 5. Participated in 5 or more community partnerships
- 6. Received health benefits
- 7. Used a published assessment
- 8. Teacher had an ECE or ECSE license

Table 11. Total Numbers of Community Collaborations and Assets

Classroom	Community Partnerships	Total Assets
1	10	6
2 3	5	6
3	2	6
4	10	5
5	7	5
6	2	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
7	2 2	5
8	6	5
9	5	5
10	2	5
11	5 2 3 7	5
12	7	5
13	6	5
14	7	5
15	5	5
16	6	5
17	8	5
18	2	5
19	2 5 1	5
20		5
21	5	5
22	4	5 5 5 5
23	5 3	5
24		5
25	7	5
26	3 3 3	4
27	3	4
28		4
29	4	4
30	6	4
31	4	3
32	3	3
33	1	3
34	8	3
35	3 1 8 1 4 4 0	3 3 3 2 2 2 2 1
36	4	2
37	4	2
38		2
39	0	1
40		

Child Developmental Status

The majority of children scored within normal limits on the measures of child developmental status. However, several children's scores highlight the fact that the Shared Visions Preschool Programs serve very vulnerable children and that vigilance regarding their development across all domains is essential. This section will provide summaries of assessments of children's skills completed by Shared Visions classroom teachers, research assistants, and kindergarten teachers.

Assessments completed in the fall of each year revealed that Shared Visions classroom teachers identified concerns for several children across a variety of developmental areas. Based on teachers' ratings, the research team classified participating children as being within expected developmental expectations or presenting mild or serious concerns in one or more developmental areas. Reports of the teachers' assessments were received for 154 preschool aged children.

Overall, 43 (27.9%) children were identified as presenting mild concerns and 17 (11.0%) children were identified as presenting serious concerns in one or more developmental areas.

Mean scores for the spring and fall assessments on each of the developmental measures are presented below in Table 12; Table 12 presents classroom mean scores for children enrolled in high quality and low classrooms, as differentiated by the median split on the ECERS-R Total mean score, respectively. Overall, the spring mean score on the BBCS-R was 102, while the fall mean score was 101.5. On the PLS-4, the spring mean scores were 99 for the Auditory Comprehension subscale and 97 for the Expressive Communication subscale. Fall scores were 97 for the Auditory Comprehension subscale and 95.6 for the Expressive Communication subscale. The composite scores on this measure were 98.6 for spring and 96.5 for fall.

On the DECA, the mean scores for the Total Protective Factors subscale were 57 in the spring and 54 in the fall. T-scores of less than or equal to 40 on the Total Protective Factors subscale represent scores in the "concern" area. Mean scores for the Behavior Concerns subscale were 45 in the spring and 46 in the fall. T-scores of greater than or equal to 60 on the Behavior Concerns subscale represent scores in the "concern" area. Spring mean scores on the SCBE-30 were as follows: 4.25 for Social Competence subscale, 1.82 for the Anxiety-Withdrawal Subscale, and 1.88 for the Anger-Aggression subscale. Fall mean scores were 4.06 for Social Competence, 1.72 Anxiety-Withdrawal, 1.88 for the Anger-Aggression subscale. Each item is scored from 1 to 6, and subscale scores are derived from averaging the items contained within each subscale. Tables 13a and 13b presents detailed information regarding mean scores on each measure for each classroom in the high quality and low quality groups as measured by the ECERS-R.

Table 12. Mean scores on child development outcomes, classrooms split at ECERS-R >4.6.

	Fall				Spring			
		High		Low		High	Ü	Low
Measure	n	(SD)	n	(SD)	n	(SD)	n	(SD)
DECA Total Protective Factors	40	46.40	58	56.83	88	41.63	91	55.37
(T-score)		(15.32)		(9.65)		(16.58)		(9.16)
DECA Behavioral Concerns	38	52.88	60	45.50	82	59.14	88	47.50
(T-score)		(8.67)		(15.00)		(9.90)		(12.39)
BBCS-R	41	103.68	66	99.00	91	102.52	100	101.57
(standard score)		(18.10)		(15.11)		(16.03)		(15.13)
PLS-IV Expressive Communication	38	98.16	66	92.98	83	97.69	92	94.95
(standard score)		(13.41)		(10.00)		(12.48)		(10.74)
PLS-IV Auditory Comprehension	41	98.41	64	95.13	85	99.28	100	96.70
(standard score)		(18.22)		(13.96)		(14.46)		(13.77)
Preschool Language Scale Total Language	38	99.13	64	93.30	81	98.16	92	95.95
(standard score)		(15.49)		(12.37)		(14.33)		(12.23)
SCBE Social Competence	39	4.12	61	4.12	90	4.39	96	4.12
(subscale mean score)		(0.94)		(0.95)		(0.93)		(1.06)
SCBE Anxiety-Withdrawal	39	1.67	61	1.75	90	1.69	96	1.73
(subscale mean score)		(0.70)		(0.62)		(0.78)		(0.68)
SCBE Anger-Aggression	39	1.91	61	1.82	90	1.81	96	1.96
(subscale mean score)		(1.12)		(0.77)		(0.94)		(1.07)

Table 13a. Classroom Mean Spring Scores on Child Development Outcomes (N=19) for High Quality Classrooms (ECERS-R >=4.6)

			PLS	PLS	DECA				
		BBCS-	Aud.	Ex.	Total	DECA	SCBE	SCBE	SCBE
Class	n	R	C.	Com.	PF	Beh.Con.	SC	\mathbf{AW}	AA
1	6	**92.00	*93.17	*93.83	52	*50.17	4.02	1.88	1.9
5	4	103.75	96.5	99	53.25	44.33	4.2	1.78	1.2
7	6	*96.00	103	96.83	*56.17	*50.20	4.15	2.22	1.92
8	4	117.75	103.5	106.33	57.5	46.5	4.76	1.13	1.58
11	6	*94.67	*90.67	*95.00	65.17	*49.40	4.63	1.85	2.17
13	5	**86.80	*92.60	*94.40	59	44.8	4.38	1.52	1.76
14	3	107.33	*96.67	*91.67	60.67	53.67	4.53	2.4	2.37
15	4	*105.00	103.75	101	65.75	42.67	4.65	2.29	1.83
16	4	*98.25	110.33	105.5	64.5	34.5	4.97	1.08	1.83
17	4	111.25	129	114	56.25	37	4.75	1.15	1.1
18	5	108.2	116.33	108.5	58.2	34.6	4.6	1.44	1.4
20	6	*101.50	*96.67	*99.50	68.33	24.83	4.63	1.13	1.28
21	8	*100.63	*98.00	**96.00	*64.25	**33.75	4.99	1.14	2.15
22	3	111.67	105.67	102.33					
23	4	121.25	118.5	111	52.75	20.75	3.75	2.05	1.48
26	8	*98.33	**89.83	**87.33	*48.80	**58.86	3.08	1.8	2.59
27	4	105.5	*97.75	*97.75	53.5	40.5	4.65	2	1.25
37	8	112.43	*99.25	*98.29	*61.29	*36.71	4.69	1.67	1.81
40	2	*79.5	*83.00	**76.50			4.11	3.2	1.9

^{*}One child more than 1 standard deviation below the norm or in the concern category **Two or more children more than 1 standard deviation below the norm or in the concern

category

Table 13b. Classroom Mean Spring Scores on Child Development Outcomes (N=21) for Low Quality Classrooms (ECERS-R < 4.6)

-				PLS	DECA				
			PLS	Ex.	Total	DECA	SCBE	SCBE	SCBE
Class	n	BBCS-R	Aud. C.	Com.	PF	Beh.Con.	SC	AW	AA
2	1						3.9	3.3	2.8
3	4	99.5	*96.00	92.75	59.75	*44.50	4.48	1.68	2.18
4	6	*100.83	*96.50	*93.00	58.17	44.8	4.23	1.72	1.7
6	5	111	*102.20	98	51.6	*59.20	3.44	2.16	3.2
9	2	89.5	93.5	102	48	*56.00	4	2.7	2
10	2	109.5	106.5	102	51	47	3.85	1.9	1.8
12	6	**100.00	**86.5	**83.5	56.5	41.33	4.55	1.5	1.4
19	5	**85.20	*87.80	*89.20	53.5	47.75	4.18	1.7	1.72
24	6	103.5	98.5	*92.5	61.67	*47.17	5.16	1.53	1.79
25	5	109.8	*99.80	100.2	54.6	*46.20	3.72	2.38	2.12
28	7	**96.29	**86.86	**96.80	*45.00	**56.14	2.64	1.46	2.54
29	4	91.75	**83.50	*87.00			4.05	1.6	2
30	4	102.5	*97.00	99					
31	6	112.67	*105.50	*102.50	51.5	41.2	3.83	1.55	1.25
32	8	*115.25	104.38	**99.13	67.75	30.86	5.65	1.29	1.11
33	3	*92.33	101	93.67	56	49.33	4.27	1.83	1.74
34	5	*99.80	*94.80	94.25	*46.80	48.4	3.53	1.56	1.64
35	5	**95.00	98.2	95.8	57.6	48.2	3.34	1.8	2.44
36	6	**91.17	*91.50	**88.80	*47.17	**65.67	3.15	2.1	3.75
38	8	102.75	*100.63	99.43	63.5	41.38	5.1	1.34	1.64
39	3	112	112	98	50.67	50.67	4.07	2.97	1.41

^{*}One child more than 1 standard deviation below the norm or in the concern category

Assessments completed by the children's kindergarten teachers were available for 126 (65%) of participating children. Among these 126 children, 78 (40%) scored within expected limits indicating that they presented few risks, while 26 (13%) of these children presented some risk, and 22 (11%) of these children appeared to be at definite risk in the area of early literacy skills.

^{**}Two or more children more than 1 standard deviation below the norm or in the concern category

Relations Among Classroom Quality Measures

Mean scores on classroom quality measures were submitted to correlational analyses to examine the relations among these variables. First, a pronounced pattern of strong relations among various measures of classroom quality was demonstrated. The mean score on the ECERS-R was correlated with mean scores on the CIS (r = .64, p < .01), the ECERS-R Activities subscale (r = .71, p < .01), the ECERS-R Interaction subscale (r = 62, p < .01), the ECERS-R Language and Reasoning subscale (r = .75, p < .01), the ECERS-R Personal Care Routines subscale (r = .68, p < .01), the ECERS-R Program Structure subscale (r = .65, p < .01), the ECERS-R Space and Furnishings subscale (r = .79, p < .01), as well as the ECERS-E Mathematics subscale (r = .45, p < .01), and the ECERS-E Literacy subscale (r = .51, p < .01). The ECERS-E mean score was also related to the CIS score (r = .48, p < .01).

While in this sample, the Assets Index was not related to classroom quality measures overall, one asset indicator, "Having five or more community partnerships", was related strongly to overall classroom quality (r = .391, p < .01).

Relations Among Child Development Scores

Shared Visions teachers in high quality classrooms were more likely to identify developmental concerns than were their counterparts teaching in lower quality classrooms. Overall, Shared Visions classroom teachers' fall assessments of children's skills were related to children's skills in the spring as assessed by trained research assistants and the teachers themselves. Specifically, teachers' ratings of concerns were related to spring scores on the PLS-4 (r = -.186, p < .01) and the BBCS-R (r = -.271, p < .01). In addition, the spring scores on the BBCS-R (r = -.353, p < .01) and PLS-4 (r = -.332, p < .01) were related to the kindergarten teachers' assessments of early literacy skills even though the Shared Visions classroom teachers'

fall assessments were not significantly related to risk levels as assessed by the kindergarten teachers.

Relations Between Classroom Quality and Child Developmental Status

Analysis of the relations between classroom quality and child developmental status were conducted in two ways: based on global quality (as demonstrated by on the ECERS-R Total mean score), and based on the composite variable, Academic-Related Curriculum Quality (ACQ). Results of these analyses are presented separately.

Global quality. Classroom means on classroom quality and child outcome measures were submitted to correlational analyses to examine the relations among these variables. First, ratings of classrooms quality were related to the overall numbers of concerns about children's developmental status identified by Shared Visions classroom teachers on their fall assessments (r = .223, p < .01) with teachers in higher quality classrooms identifying more concerns.

Some relations between classroom quality and spring child development scores were revealed. The strongest relations were between the ECERS-E literacy subscale score and the BBCS-R scores (r = .37, p < .05). The Total Protective Factor subscale score on the DECA was related to the ECERS-R Parents and Staff subscale score (r = .41, p < .05). Unanticipated relations were found between the ECERS-E Mathematics subscale score and the Anxiety-Withdrawal subscale score on the SCBE 30 (r = .34, p < .05), as well as the BBCS-R (r = -.35, p < .05).

Curriculum-related quality. We did not anticipate that we would find significant effects of curriculum-related quality on children's social-emotional development. However, we did expect to find relations between curriculum-related classroom quality and academic skills.

Analysis of variance was conducted to examine whether children enrolled in classrooms grouped

on the basis of their scores on the Academic-Related Curriculum Quality (ACQ) variable scored differently. These analyses revealed some significant effects in the areas of language development. Table 14 presents a summary of classroom mean scores for each of the measures of child developmental status for three groups of classrooms with groups divided on the basis of ACQ scores. Statistically significant differences in scores were found for both subscales of the PLS-IV as well as the total PLS-IV. On all these measures, the children enrolled in the highest quality classrooms scored significantly higher than the children enrolled in the lowest quality classrooms. The differences between the scores of children enrolled in the medium quality classrooms and those enrolled in classrooms in the other two groups were not significant. Among the highest quality classrooms, the overall mean score on both subscales of the PLS-IV as well as the total score were above 100, while among classrooms in the other two groups, all means on the PLS-IV were below 100.

Table 14. Mean Child Outcomes among Classrooms Grouped by ACQ Mean Scores

		Levels	
Measure	Low (n)	Medium (n)	High (n)
BBCS-R Standard Score	100.63 (12)	100.40 (16)	105.56 (11)
DECA Behavioral Concerns t-score	47.15 (11)	41.59 (14)	47.19 (11)
DECA Total Protective Factors t-score	53.45 (11)	60.40 (14)* ^b	55.72 (12)
PLS-IV Auditory Comprehension	95.39 (12)*a	98.55 (16)	103.80 (11) *a
PLS-IV Expressive Communication	94.17 (12)*a	96.61 (16)	100.59 (11) *a
PLS-IV Standard Score	94.40 (12)*a	97.78 (16)	104.25 (11) *a
SCBE Anger-Aggression Score	1.90 (12)	1.85 (15)	1.89 (12)
SCBE Anxiety-Withdrawal Score	1.71 (12)	1.71 (15)	2.07 (12)
SCBE Social Competence Score	3.99 (12)	4.45 (15)	4.26 (12)
Class language/academic factor	96.88 (12)*a	98.84 (16)	104.84 (11) *a
Class social skill factor	25.06 (11)	25.50 (15)	25.28 (11)

^b Level 2 > level 1 & 3, p < .05

^a Level 1 < level 3, p < .05

Conclusions

Findings regarding classroom quality are notable for several reasons. Similar to previous researchers' findings (Phillips, et al., 2000), good things go together in terms of classroom quality as evidenced by the strong relations among the various measures of classroom quality. However, quality varies considerably among Shared Visions classrooms. The overall mean for classroom quality as measured by the ECERS-R was slightly below the good level for participating classrooms, and several subscale means were above the good level. However, the means for some ECERS-R subscales, most notably the Activities subscale, as well as for both the Literacy and Mathematics subscales of the ECERS-E were considerably below the good level. These are the subscales most representative of the curricular strength of the Shared Visions Preschool Programs; relatively low scores on these subscales provide substantial reason for concern. Overall, these findings provide strong argument for continuing ongoing efforts the Iowa Department of Education is sponsoring to enhance overall classroom quality, strengthen curricular offerings, and enhance teachers' competence within the Shared Visions Preschool Programs. For example, the Iowa Department of Education has provided training on use of published curricula and assessments, as well as training on implementation of specific instructional strategies in a variety of curricular areas (e.g., mathematics, early literacy). In addition, the Iowa Department of Education is providing training and support to assist Shared Visions Preschool Programs in maintaining accreditation under new standards put forth by the National Association for the Education of Young Children.

The Assets Index scores were not related to overall classroom quality for this sample.

The limited number of variables available for use in creating this variable, as well as the lack of variability among classrooms on this measure likely affected this finding. However, scores on

the Assets Index revealed that most classrooms in this sample had in place several assets typically associated with high quality. One asset used to create the Index, "Having five or more community partnerships", was strongly related to overall classroom quality which is noteworthy for at least two reasons. Strong partnerships among community agencies are recommended and considered essential in providing high quality services to vulnerable children and families such as those served by Shared Visions Preschool Programs. And, as Iowa continues implementing its Statewide Voluntary Preschool Program, this finding argues for the Iowa Department of Education's continued encouragement of and support for efforts to foster and/or strengthen partnerships between participating school districts and other community-based service programs (e.g., child care providers), as well as agencies that provide supplemental services (e.g., family support, nutrition).

Findings regarding child developmental status suggest that the majority of children served by the Shared Visions Preschool Programs are making satisfactory developmental progress. This is very good news given that Shared Visions programs serve very vulnerable children. However, the results provide evidence that several children are presenting developmental concerns. Thus, the developmental progress of children enrolled in Shared Visions classrooms must be monitored closely and collaborations between the Shared Visions Preschool Programs and early childhood special education service providers must be further strengthened. No children with IEPs participated in this evaluation; yet, several children scored far enough outside developmental expectations to warrant serious concern regarding their development.

Findings regarding the relations between program quality and child developmental status confirmed our expectations that high quality curriculum leads to better outcomes for children.

Although all of these programs could be considered high quality based on their achievement of NAEYC accreditation, distinctions can be made among them. The finding that children's scores in the area of language development favored the children in classrooms providing the highest quality curricula suggests that more can be done to assist teachers in providing the best possible educational programs that will support children's optimal development. These findings also suggest that future evaluations look beyond global measures of quality to examine more closely specific dimensions of quality (e.g., curriculum, specific instructional practices, teacher-child interactions) that are associated with positive child outcomes.

The relation between overall classroom quality and Shared Visions classroom teachers' identification of developmental concerns among participating children warrants attention. This may well indicate that administrators are taking steps to enroll children presenting more developmental concerns in higher quality classrooms. Similarly, this finding may indicate that teachers able to provide higher quality classroom experiences are also adept at identifying and intervening with children's developmental concerns. This finding, while modest, enhances the importance of the relations between classroom quality and children's developmental status.

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Table 1. Classroom Quality Summary Scores for Low Quality Classrooms (ECERS-R <=4.6)

Classroom	ECERS-R	Space & Furnishings	Personal Care	Language & Reasoning	Activities	Interaction	Program Structure	Parents & Staff	ECERS- E	Arnet
1	2.42	3.00	1.83	2.00	2.80	1.00	1.00	4.00	1.82	2.64
2	3.28	3.63	1.00	4.75	2.90	3.80	4.50	3.50	2.82	2.64
3	3.31	3.00	2.00	3.25	3.20	3.40	4.67	4.50	2.27	3.27
4	3.53	3.38	2.17	5.50	3.50	1.20	2.75	6.33	2.73	3.23
5	3.76	3.25	2.67	4.25	2.55	5.40	4.50	5.17	2.64	3.38
6	3.88	2.71	3.00	3.00	3.44	5.80	5.00	5.00	1.73	3.04
7	3.91	4.00	3.17	3.75	3.80	3.80	2.00	6.17	3.09	3.19
8	3.94	3.67	3.33	3.00	3.50	5.60	5.33	3.50	2.91	3.42
9	3.98	4.75	2.17	4.00	3.70	1.80	5.25	6.17	1.91	2.58
10	4.00	4.50	2.33	4.25	2.50	5.40	5.25	5.33	2.36	3.28
11	4.02	4.25	2.00	3.75	4.70	4.20	3.67	4.67	2.55	2.92
12	4.09	3.75	2.67	4.25	3.90	4.20	5.50	5.17	1.82	3.12
13	4.09	4.00	1.83	5.00	4.10	5.20	5.00	4.33	3.00	3.15
14	4.09	4.63	3.00	3.50	3.10	6.20	5.00	4.17	2.55	3.38
15	4.28	4.50	1.50	4.50	5.50	4.80	5.75	3.17	5.09	2.92
16	4.31	4.63	2.50	4.75	4.11	4.80	4.00	5.50	3.18	3.46
17	4.33	4.88	2.00	4.50	4.10	5.20	5.00	4.67	1.82	3.38
18	4.40	4.50	1.50	5.25	5.70	4.80	5.75	3.17	5.60	3.28
19	4.45	5.00	2.67	5.75	4.20	5.00	5.00	3.67	2.91	3.35
20	4.48	4.75	3.40	6.75	4.00	4.80	1.75	5.83	5.64	3.72

Table 2. Classroom Quality Summary Scores for High Quality Classrooms (ECERS-R >=4.6)

High Group

	ECERS-	Space &	Personal	Language &			Program	Parents &	ECERS-	
Classroom	R	Furnishings	Care	Reasoning	Activities	Interaction	Structure	Staff	E	Arnet
21	4.65	4.13	2.33	5.50	3.90	6.60	5.50	6.17	4.09	3.50
22	4.69	4.63	2.50	5.75	3.90	5.20	7.00	6.00	3.18	3.04
23	4.70	4.63	2.67	4.50	4.10	5.60	6.50	6.00	3.09	3.46
24	4.71	4.88	3.00	4.75	3.80	6.40	6.67	5.33	2.91	3.54
25	4.74	4.63	3.00	6.00	4.30	5.20	5.00	5.67	4.45	3.54
26	4.74	5.50	4.00	5.50	3.60	6.00	6.33	4.00	2.64	3.50
27	4.79	5.25	2.67	6.75	4.20	5.80	4.50	5.33	4.55	3.65
28	4.79	4.50	2.20	6.25	4.70	5.40	5.75	5.33	5.00	3.46
29	4.83	5.13	2.40	6.00	4.90	6.00	5.75	4.00	4.64	3.58
30	4.83	5.25	3.40	5.25	4.00	6.40	6.00	4.67	3.64	3.50
31	4.86	5.13	3.40	6.00	3.90	7.00	4.25	5.17	2.82	3.62
32	4.98	6.38	5.33	4.50	3.80	2.40	7.00	5.83	4.00	2.92
33	5.00	4.75	6.33	4.50	3.60	6.20	6.25	4.83	3.45	3.29
34	5.05	4.25	5.00	6.25	4.70	6.20	5.25	4.83	4.73	3.54
35	5.12	4.88	3.60	5.25	4.90	6.60	6.25	5.00	4.64	3.69
36	5.16	6.25	2.50	5.25	4.70	5.80	5.75	6.17	4.27	3.54
37	5.33	5.88	3.40	6.50	5.10	6.20	5.25	5.17	4.00	3.50
38	5.47	5.25	5.17	7.00	4.70	6.40	5.00	5.83	4.18	3.46
39	5.48	4.50	4.33	7.00	5.60	6.80	6.00	5.33	3.91	3.58
40	5.81	5.25	5.33	6.00	5.50	7.00	7.00	5.83	3.36	3.50
41	5.86	6.88	5.17	6.00	6.00	3.60	7.00	6.00	4.00	3.50